Maria-Luisa Rapun

List of Publications by Year
in descending order

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Version: 2024-02-01

42	628	567281	610901
papers	citations	15 h-index	24 g-index

42	42	42	265
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Topological sensitivity analysis revisited for time-harmonic wave scattering problems. Part I: the free space case. Engineering Computations, 2022, 39, 232-271.	1.4	7
2	Topological sensitivity analysis revisited for time-harmonic wave scattering problems. Part II: recursive computations by the boundary integral equation method. Engineering Computations, 2022, 39, 272-312.	1.4	3
3	Topological Imaging Methods for the Iterative Detection of Multiple Impedance Obstacles. Journal of Mathematical Imaging and Vision, 2022, 64, 321-340.	1.3	1
4	Non-Invasive Testing of Physical Systems Using Topological Sensitivity. Applied Sciences (Switzerland), 2021, 11, 1341.	2.5	2
5	Adaptive sampling and modal expansions in pattern-forming systems. Advances in Computational Mathematics, 2021, 47, 1.	1.6	1
6	Processing the 2D and 3D Fresnel experimental databases via topological derivative methods. Inverse Problems, 2021, 37, 105012.	2.0	6
7	Multifrequency Topological Derivative Approach to Inverse Scattering Problems in Attenuating Media. Symmetry, 2021, 13, 1702.	2.2	2
8	Application of the topological derivative to post-processing infrared time-harmonic thermograms for defect detection. Journal of Mathematics in Industry, 2020, 10, .	1.2	4
9	On the solution of direct and inverse multiple scattering problems for mixed sound-soft, sound-hard and penetrable objects. Inverse Problems, 2020, 36, 095014.	2.0	5
10	Fully Online ROMs and Collocation Based on LUPOD. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2020, , 81-93.	0.2	0
11	Solving inverse geometry heat conduction problems by postprocessing steady thermograms. International Journal of Heat and Mass Transfer, 2019, 143, 118490.	4.8	11
12	Detection of multiple impedance obstacles by non-iterative topological gradient based methods. Journal of Computational Physics, 2019, 388, 534-560.	3.8	15
13	When topological derivatives met regularized Gauss-Newton iterations in holographic 3D imaging. Journal of Computational Physics, 2019, 388, 224-251.	3.8	21
14	Detecting Damage in Thin Plates by Processing Infrared Thermographic Data with Topological Derivatives. Advances in Mathematical Physics, 2019, 2019, 1-18.	0.8	7
15	Topological Sensitivity for Solving Inverse Multiple Scattering Problems in Three-Dimensional Electromagnetism. Part II: Iterative Method. SIAM Journal on Imaging Sciences, 2018, 11, 734-769.	2.2	14
16	LUPOD: Collocation in POD via LU decomposition. Journal of Computational Physics, 2017, 335, 1-20.	3.8	9
17	Topological Sensitivity for Solving Inverse Multiple Scattering Problems in Three-dimensional Electromagnetism. Part I: One Step Method. SIAM Journal on Imaging Sciences, 2017, 10, 1291-1321.	2.2	36
18	Noninvasive Imaging of Three-Dimensional Micro and Nanostructures by Topological Methods. SIAM Journal on Imaging Sciences, 2016, 9, 1324-1354.	2.2	11

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19	Defect Detection from Multi-frequency Limited Data via Topological Sensitivity. Journal of Mathematical Imaging and Vision, 2016, 55, 19-35.	1.3	35
20	Domain and Parameter Reconstruction in Photothermal Imaging. Mathematics in Industry, 2016, , 235-242.	0.3	0
21	Adaptive PODâ€based lowâ€dimensional modeling supported by residual estimates. International Journal for Numerical Methods in Engineering, 2015, 104, 844-868.	2.8	21
22	Parameter Identification in Photothermal Imaging. Journal of Mathematical Imaging and Vision, 2014, 49, 273-288.	1.3	9
23	Numerical methods for direct and inverse problems in Acoustics and Photothermal Science. BoletÃn De La Sociedad EspaÃ‘ola De MatemÃ‡tica Aplicada, 2013, 61, 79-103.	0.9	1
24	Hybrid Topological Derivative-Gradient Based Methods for Nondestructive Testing. Abstract and Applied Analysis, 2013, 2013, 1-20.	0.7	6
25	Hybrid topological derivative and gradient-based methods for electrical impedance tomography. Inverse Problems, 2012, 28, 095010.	2.0	26
26	Variational Methods for Inverse Conductivity Problem. , 2011, , .		0
27	Reduced order models based on local POD plus Galerkin projection. Journal of Computational Physics, 2010, 229, 3046-3063.	3.8	90
28	Determining Planar Multiple Sound-Soft Obstacles fromÂScattered Acoustic Fields. Journal of Mathematical Imaging and Vision, 2010, 36, 185-199.	1.3	18
29	An iterative method for parameter identification and shape reconstruction. Inverse Problems in Science and Engineering, 2010, 18, 35-50.	1.2	9
30	Symmetric boundary integral formulations for Helmholtz transmission problems. Applied Numerical Mathematics, 2009, 59, 2814-2823.	2.1	16
31	Domain reconstruction using photothermal techniques. Journal of Computational Physics, 2008, 227, 8083-8106.	3.8	20
32	Dirac delta methods for Helmholtz transmission problems. Advances in Computational Mathematics, 2008, 28, 119-139.	1.6	10
33	Mixed boundary integral methods for Helmholtz transmission problems. Journal of Computational and Applied Mathematics, 2008, 214, 238-258.	2.0	19
34	Topological Derivatives for Shape Reconstruction. Lecture Notes in Mathematics, 2008, , 85-133.	0.2	26
35	Solving inhomogeneous inverse problems by topological derivative methods. Inverse Problems, 2008, 24, 045014.	2.0	92
36	Exterior Dirichlet and Neumann Problems for the Helmholtz Equation as Limits of Transmission Problems. , 2008, , 207-216.		2

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37	Detecting corrosion using thermal measurements. Inverse Problems, 2007, 23, 53-72.	2.0	14
38	Boundary Element Simulation of Thermal Waves. Archives of Computational Methods in Engineering, 2007, 14, 3-46.	10.2	17
39	A mixed-FEM and BEM coupling for the approximation of the scattering of thermal waves in locally non-homogeneous media. ESAIM: Mathematical Modelling and Numerical Analysis, 2006, 40, 871-896.	1.9	6
40	Boundary integral approximation of a heat-diffusion problem in time-harmonic regime. Numerical Algorithms, 2006, 41, 127-160.	1.9	24
41	Indirect Methods with Brakhage-Werner Potentials for Helmholtz Transmission Problems. , 2006, , 1146-1154.		11
42	A Mixed BEM Applied to Scattering of Thermal Waves in Composite Materials. , 2004, , 31-36.		1